

New Features

FOCUS Version 7.1 Features

FOCUS Performance Enhancements

Intelligently Partitioned FOCUS Data Sources

A partition is a separate data file that contains part of a database. An intelligent partition is a partition that contains the entire database structure, but only for specific field values. For example, if your business is organized by region, you can create intelligent partitions for each region. You create a FOCUS Access File to contain the information about partitions and their selection criteria. When you report against the data source, FOCUS compares the selection criteria in the request to the selection criteria in the Access File and opens only the necessary partitions, minimizing I/O. A data source can consist of up to 250 partitions.

Raised Limits

Two-Gigabyte FOCUS Database Support

Each physical file in a FOCUS data source can now hold up to two-gigabytes. Using intelligent partitioning, FOCUS data sources of up to 500-gigabytes are now supported.

Increased Number of Display Fields

The maximum number of display fields in a report has been increased from 256 to approximately 495.

General Enhancements

REXX Subroutines

A FOCUS request can now call subroutines written in REXX, adding a 4 GL option to the languages supported for user-written subroutines.

DATASET Attribute in a Master File

You can now specify a non-standard physical file name for a FOCUS, VSAM or fixed sequential data source using the DATASET attribute in a Master File. FOCUS then allocates the data source appropriately.

Date-Time Data Type

The new date-time data type supports both date and time components. It has a new format code, H, and comes with a set of functions for manipulating date-time values.

Token Delimited Files

FOCUS can now read sequential data sources in which any character or group of characters is used as the delimiter between field values.

Dialogue Manager TRUNCATE Function

The Dialogue Manager TRUNCATE Function removes trailing blanks in Dialogue Manager variables.

FOCUS CRTFORM HTML Translation

The HTML/TP feature of Web390 now has an enhanced ability to handle the dynamic nature of FOCUS CRTFORMs. Issuing the command SET WEBTAB=ON places @ signs around all CRTFORM display fields so that HTML/TP can recognize them whether or not they currently contain data values.

Reporting Enhancements

Aggregating and Sorting Report Columns

Numeric columns can now be aggregated or computed and sorted in one pass of the data using the phrase BY TOTAL.

Reporting From Independent Paths

The SET MULTIPATH command controls how screening tests on independent paths of a data source are applied. With MULTIPATH = SIMPLE, tests on independent paths are applied as though connected by an OR operator, so that if one path passes its screening criteria its parent segment is included in the report output. The setting MULTIPATH = COMPOUND treats screening tests on independent paths as though they are connected by the AND operator. With this setting, a parent instance is only included in report output if all of its descendent paths pass their screening criteria.

HOLD FORMAT INTERNAL

This new format does not pad integer and packed decimal values to full word boundaries in the resulting HOLD file, making it more efficient to access them with 3GL languages such as COBOL.

FILEDEF for Extract Files

You can now specify the file name, file type, and file mode of an extract file using the FILEDEF command in CMS.

Comma Suppress Edit Format Option

This new display option, identified by a lower case letter c in a format specification, suppresses the display of commas in numeric data types that normally display with commas.

Percent Edit Format Option

This new display option, identified by a percent sign (%) in a format specification, displays a percent sign after a numeric field value. This option does not cause FOCUS to calculate a percent.

DEFINE Functions

You can now create named groups of FOCUS calculations that take arguments and return a value independent of a specific Master File. You can then invoke these functions in DEFINE or COMPUTE commands, passing them arguments from any data source.

Embedding Text Fields in Headings

Text fields can be embedded in report headings, footings, subheadings, and subfootings.

Data Adapter Enhancements

Oracle Data Adapter IXSPACE Setting

You can now override the parameters used for the Oracle index space implicitly created by the CREATE FILE and HOLD FORMAT SQLORA commands.

Adabas Write Data Adapter

You can now use the FOCUS MODIFY and Maintain facilities to add, delete, and update records in Adabas data sources.

Web390 Version 3.3

Web390 is a commercial-strength Internet server that transforms IBM mainframes into World Wide Web application and data servers, capable of supporting global Internet and Intranet activities for thousands of users. It is a secure server, with full SSL (Secure Socket Layer) protection. By linking the processing power and storage capacities of mainframes with today's Web browsers, WEB390 enables organizations to serve up mainframe data and applications over the Internet without adding costly emulation software to each end user's workstation.

Web390 affords a secure gateway to 3270-based applications in VM/CMS, MVS/TSO or CICS, allowing browser users to access the legacy applications and data that support day-to-day commercial operations. Thanks to the SSL support, you can safely use your mainframe as a repository for distributing information to your entire user population, on a broadcast or a "need to know" basis. When developing new Web applications, you can also use WEB390 to store and deliver Java applets as well as HTML, VRML, and other MIME data types.

Web390 is a standalone Internet server that works with any mainframe application. It will also be offered as an optional upgrade for the Web Interface for mainframe FOCUS, to provide full SSL protection for sites planning to offer products in the public arena

Version 3.3 offers the following new features:

- Enhancements to the HTML/TP feature. This feature allows you to customize 3270 screens. The new template mode lets you customize the PF keys without making a static version of the actual screen data. Dynamic field properties automatically handle the dynamic nature of some applications.
- Server side caching.
- HFS document retrieval.
- Level 3 authentication with LDAP.
- Support for standard CERN logs.

FOCUS Version 7.0 Release 9 Features

FOCUS Performance Enhancements Fusion

Version 7.0 release 9 introduces the Fusion database for CMS and MVS FOCUS. Fusion is a high performance database whose unique Multi Dimensional Indexing (MDI) architecture extends the scope of high-speed multi-dimensional query performance.

External Sort

- Aggregation is performed directly by the external sort engine. A query containing the verb SUM may now be passed directly to an external sort. This results in an overall performance improvement for queries containing the verb SUM.
- When an external sort handles aggregation, alpha and smart date records are returned in a different order from the FOCUS sort. A new setting called SUMPREFIX has been created to control the order in which the records are displayed within a report. FOCUS returns the LAST alpha or smartdate record from the database. External sort products like SyncSort and DFSORT return the first record.
- External sorts may now directly produce a HOLD file. Performance is improved by having the sorted answer set written directly to a HOLD file without creating the additional overhead of internal areas.

FOCUS General Enhancements

Euro Currency Support

With the advent of a single European currency called the Euro, converting between different currencies and triangulation become issues. FOCUS now provides a methodology for converting currencies using the rules established by the European Economic Union.

System Wide Profile Support

Prior to Version 7.0, FOCPARM ERRORS provided full FOCEXEC support. TABLE, MATCH, GRAPH, and Dialogue Manager commands were able to execute from this profile. With Version 7.0 Release 1, we removed this support. It has been added back under the name FOCPROF. FOCPROF will execute as a member in the ERRORS PDS in MVS or filetype ERRORS in CMS.

MVS FOCUS Databases may span multiple volumes

SUFFIX=FOC files may now be allocated with the UCOUNT parameter in MVS. This allows a single physical FOCUS file to exist on multiple DASD volumes. This support is also extended to our default files HOLD, SAVE, SAVB, and FOCSORT.

- IBITABLA may also be customized at install time to indicate how many volumes these files should span.

DYNAM Support for UCOUNT

The DYNAM command now supports the UCOUNT parameter for allocating a file to multiple units.

ESCAPE Character support for SQL LIKE operator

The SQL LIKE operator now supports new syntax to identify an escape character. Using the escape character, the special characters '%' and '_' can be specified as characters that must be included in the data retrieved. The escape character syntax is propagated to the SQL generated by the Relational Interfaces.

'? SET' Enhancements

FOCUS has many SET commands. Each new feature is created with the ability to enable or disable it via a SET command. The typical queries '? SET' and '? SET ALL' have been expanded to check the state of a particular setting. New syntax, '? SET FOR featurename' yields details on the current state of this feature plus details on where it may be set within FOCUS. The '? SET NOT featurename' syntax lists areas of FOCUS in which the setting is not valid.

REBUILD Prompt Changes

We have created a vertical list that numbers each REBUILD option. This is a departure from the single line prompt. The old syntax is still supported. The REBUILD commands may still be stacked in a FOCEXEC or stacked as part of SYSIN for batch usage.

Controlling Rebuild Messages

REBUILD normally displays a count for each 1000 instances read during the database retrieval phase of the REBUILD utility. The message, REFERENCE..AT SEGMENT 1000, 2000 etc. displays. This message may now be controlled via SET REBUILDMSG=nnnn, where nnnn is the number of instances retrieved prior to displaying the REFERENCE..AT SEGMENT message. This feature may be used to dramatically reduce the number of messages displayed during database maintenance operations.

DYNAM Support for Relative GDG numbers

The DYNAM command now supports the use of a relative number when indicating an existing generation and version. The syntax, 'DYNAM ALLOC FILE DDNAME DS PREFIX.DSNAME(-1) SHR REU' is now fully supported.

Leading Zeros

When a Dialogue Manager string with a two-digit year is used as input to a date subroutine, the leading zeros will not be truncated from the resulting date if LEADZERO is set ON.

New HOLD Format Options

- HOLD FORMAT EXCEL creates an excel spreadsheet with column headings.
- HOLD FORMAT WP CC creates a WP-formatted report with carriage control character. When the report is sent to a printer, each page prints on a separate sheet of paper. In MVS, the report output is created with record format VBA.

? PTF Enhancement

The ? PTF command now provides information about superceding PTFs and about the order in which PTFs must be applied.

INTERFACES

FOCUS Client DNS Names Support

Enables Mainframe FOCUS as a client to EDA to specify the DNS name of an EDA host in the Client Communication Configuration files for TCP/IP.

'SQL engine SET SQLJOIN OUTER ON/OFF'

With the new SQLJOIN OUTER setting you can control when the Relational Interfaces optimize outer joins without affecting the optimization of other operations such as aggregation and selection. This parameter provides backward compatibility with prior releases of the Relational Interfaces and enables you to fine-tune your applications.

Teradata Interface Kanji Support for DBCS

This enables support for the Teradata GRAPHIC and VARGRAPHIC datatypes.

ADABAS Support for PREDICT 3.4.1 and above

The AUTOADBS product has been updated to support PREDICT 3.4.1 and above. Performance has also been enhanced.

IDMS New SET command

IDMS has a new SET command to dynamically override the DBNAME and DICTNAME in the Access File.

MODEL 204 Account Split

The MODEL 204 Interface will now accept an account code as part of the logon string.

IBI Subsystem

We have restored support for dynamically starting the IBI subsystem.

Web Products

Web Interface for FOCUS

- We now support PDF format as part of the Web Interface for FOCUS. When used with the PCHOLD command the Web Interface transfers the file to the PC or opens it in Acrobat reader. PDF files may also be created using the command, 'ON TABLE HOLD FORMAT PDF'. This sequential file must then be FTP'd to the PC as an ASCII text file.
- A WINFORM application created by the CACTUS WORKBENCH on the PC can now be executed under the Web Interface.
- PCHOLD will support the following formats:
 - LOTUS
 - DIF
 - WP
 - PDF
 - PS
 - HTML
 - EXCEL

Depending on the configuration of the browser, the results will be a pop up window asking where to save the file on your PC or the file will be displayed under the appropriate program association (lotus, excel, etc).

Web390 V3.2

WEB390 version 3.2 introduces the following new features:

- The HTML/TP chargeable option, which is available as part of WEB390 Gold, provides full customization of the HTML interface for 3270 applications. Web390 has always offered the choice between Emulation mode and Translation mode. Now with HTML/TP users can create their own HTML to represent their 3270 screens.
- WEB390 offers support for method 'PUT'. In conjunction with Netscape's Composer you can create HTML documents and send them directly to the WEB390 server.

YEAR 2000 Remediation Version 7.0 Release 8R Features

- New Console security allows you to control access to the console.
- Support of IBM's new TCPIP, Network Communications Server for OS/390.
- Version 3.2 is Y2K compliant.
- Support for DD WWW3GL. Users no longer need to allocate their CGI programs to DD STEPLIB.
- Support for MOD 4 & 5 lu2 devices.

YEAR 2000 Remediation Version 7.0 Release 8R Features

FOCUS General Enhancements

Displaying Base Dates in FOCUS Reports

You can now display base dates in a FOCUS report. Previously, TABLE always displayed a blank when either a date read from a file matched the base date or a field with a smart date format had the value 0.

CHECK FILE HOLD ALL

CHECK FILE HOLD has been enhanced so you can view all of the attributes in a HOLD file including YRTHRESH and DEFCENT. The HOLD file contains two new columns with the values of FDEFCENT and FYTHRESH at the file level and two new columns with the values of DEFCENT and YRTHRESH at the field level.

New Date Math Functions for the Year 2000

- DATEADD will add months, days, years, business days, and weekdays to a Smart Date format.
- DATEMOV will move a date to a significant point on the calendar.
- DATEDIF will take the difference in business days between two Smart Date formats.
- DATECVT will convert from one date format to another.

Displaying Invalid Smart Dates in Reports

In previous releases of FOCUS, if a date in a non-FOCUS file contained an invalid date, a diagnostic error was displayed and the entire record failed to display in a report. Using a new set command, ALLOWCVTERR, it is now possible to display the rest of the record that contains the incorrect date.

Enhancement to the YRTHRESH Command

You can now set YRTHRESH as an offset from the current year in addition to specifying a year. This technique creates a moving century window that increments itself each year without modifying your application.

Enhancement to the TODAY Subroutine

The TODAY subroutine can now return a 4-digit year when you declare a DEFINE or COMPUTE field as 10 bytes. SET DATEFNS=ON must be in effect to retrieve the extended TODAY value.

Note: The formatting slashes count towards the total of 10 bytes.

Displaying a Date Variable Without Separators

You can now display a date variable containing a 4-digit year without separators. The variables are &YYMD, &MDYY, and &DMYY. These variables complement the existing 2-digit year variables &YMD, &MDY, and &DMY.

Field FORMAT=YYJUL

A new date field formatting option, FORMAT=YYJUL, lets you print a Julian date in the format YYYY/DDD. The 7-digit format displays the 4-digit year and the number of days counting from January 1.

FORMAT=JUL is still supported; however, only the last two digits of the year will display (YY/DDD).

Altering Your System Date for Testing Purposes

A new set command, SET TESTDATE={YYYYMMDD|TODAY}, lets you temporarily alter your FOCUS system date for a given application program. This is useful when determining what impact the year 2000 will have on your application programs, or when testing leap year dates such as 2000/02/29 without third-party products.

REBUILD Enhancement - Legacy Date Conversion

REBUILD will now be able to convert your database field from a legacy date into a Smart Date in your FOCUS databases.

LE Support

You can now control use of IBM's Dynamic Language Environment for IBI-supplied and user-written subroutines by setting an option in FOCPARM, in a FOCUS application, or in your FOCUS session.

MAINTAIN

Year 2000 Enhancements

MAINTAIN now supports DEFCENT and YRTHRESH settings at the global, file and field level settings.

INTERFACES

MSO Log Year 2000 Enhancements

MSO Log now displays dates with 4-digit year.

MODEL 204 and IDMS

Both the Model 204 and IDMS interfaces now support Year 2000 dates.

FOCUS Version 7.0 Release 8 Features

FOCUS Performance Enhancements

Pooled Tables

The Pooled Tables Performance Option enables efficient creation of multiple reports, graphics, and extract files with only a single pass against any database that FOCUS can report from. It dramatically minimizes database I/O and the related CPU costs. Pooled Tables can be implemented without any changes to FOCUS application code. Simple configuration settings allow individual applications or groups of requests to be fully optimized to exploit pooling.

IUCV CMS SU

Inter-user communications vehicle is now supported for CMS SU. This is a desirable protocol as the master processor is not enqueued serially per request. IUCV also offers performance gains when compared to the VMCF communications protocol.

IUCV is not supported for any release prior to R7.0.8. If any earlier release of FOCUS is used with an IUCV server the results are unpredictable. Please see the Simultaneous Usage Reference Manual, CMS Version (DN 1000015.0797)

FOCUS General Enhancements

The IBI MVS Subsystem

The IBI Subsystem can replace the IBI SVC, providing additional functionality, easier installation and maintenance, and enhanced ease of use.

Project 2000 - Phase III

The third and final phase of our year 2000 compliance for FOCUS includes rewritten user subroutines that perform date manipulations. They are: AYMD, AYM, YM, CHGDAT, GREGDT, JULDAT, DAxxx, DTxxx and FOCUS functions YMD, DMY, MDY. These subroutines and functions will now allow for century digit interpretation via the DEFCENT and YRTHRESH FOCUS settings. Date calculations for these subroutines may now extend beyond year 1999. The subroutines have also been enhanced to respect the last argument, which may contain the output format from the subroutine.

Year 2000 Subroutines

Enhancements have been made to subroutines that handle dates.

Increased DEFINE Limitation

The limit of 256 for the number of DEFINES allowed in FOCUS has been removed. The limit is now dependent on the amount of memory available.

Expanding Byte Precision for COUNT and LIST

The COUNT and LIST verbs have been expanding from 5 to 9 bytes of precision. This internally reformats COUNT and LIST from I5 to I9.

Increasing the Amount of Verbs in a Report Request

The number of verbs for a multi-verb request has been increased from 6 to 16.

Assigning Screening Conditions to a File for Reporting Purposes

A filtering mechanism that assigns screening conditions to a file has been added to the functionality of TABLE.

External Indices for FOCUS Databases

External Indices enable indexing on concatenated FOCUS databases, indexing on DEFINED fields and indexing records selected through WHERE and IF tests.

Extended Plists

Extended plists are now available in FOCUS in order to accommodate certain new VM commands, such as STORMAP and PIPE.

Date Handling for the Year 2000 in FOCUS

FOCUS displays a complete 4-digit year in all parts of FOCUS. The new format is MMDDCCYY.

Automatic Allocation of FOCUS Files

Setting FOCALLOC to ON activates automatic allocation of FOCUS databases referenced in requests when the associated Master File exists as a member of prefix.MASTER.DATA.

Querying Which PTFs Have Been Applied for a Specific Release

The ? PTF query command displays a list of PTFs applied for your current release.

Sink Validation of Userids in CMS

A new file has been created in CMS to help verify who may connect to a specific CMS sink id.

Dynamic Language Environment (LE) Support

IBM's recommended platform for high level language products is known as Language Environment for VM and MVS. It provides a unified platform for runtime services used by LE supported languages. FOCUS user-written subroutines can now be linked using IBM's LE environment.

TABLA Enhancements or Default Space Allocation Table for Work Files

FOCUS output data sets not allocated by the user are allocated dynamically by FOCUS itself.

Extended Support for Scandinavian External Sort

FOCUS supports external sort with the Scandinavian National Languages Character set, and is able to pass the sort sequences for Swedish, Danish, Finnish, and Norwegian to the external sorting products.

INTERFACES

DB2 Interface IF-THEN-ELSE Optimization

Starting with FOCUS Release 7.0.8, the DB2 Interface has been enabled to improve the performance of FOCUS TABLE requests that include IF-THEN-ELSE define statements.

DB2 Interface SET ISOLATION Command

Starting with FOCUS Release 7.0.8, interface has been enabled to take advantage of the DB2 version 4 (and higher) ability to pass an SQL statement isolation level.

MSO/CICS Cooperative Processing

CICS transactions and MSO FOCXECs may now communicate directly with each other in a synchronous mode.

EDA/MSO Console Display for IMS PSB

The EDA/ MSO Console for the DU (Display Users) screen includes a new column heading named PSB. This column displays the name of the IMS PSB scheduled for each TCB that is accessing IMS.

Invisible Ordered Character and Ordered Numeric Data Type Key Support

This feature will allow access and selection of Model 204 invisible ordered character and invisible ordered numeric fields.

System 2000 Interface Trace Facility

Two new trace levels have been enabled. The traces can be used for informational or debugging purposes.

Teradata Outer Join Optimization

This feature improves the Teradata Relational Interface performance by enabling the interface to deliver better optimized SQL to the Teradata RDBMS, permitting the RDBMS to optimize its own join processing.

Web Products

-HTMLFORM SAVE

The -HTMLFORM SAVE feature for the WEB Interface allows you to can save html content generated by the -HTMLFORM command to a file, rather than to the screen.

Automatic Activation of Web Interface for Web Browser Users

FOCUS automatically activates the interactive Web environment for FOCUS Web Interface users entering via the VM Web Interface Server or WEB390.

WEBHOME

This feature enables Web application developers to specify execution of a default FOCEXEC procedure in situations where FOCUS would normally return to command level. This allows them to prevent application users from accidentally or intentionally accessing command level FOCUS from within a Web application. This will ensure that the FOCUS application environment remains intact and consistent even when Web applications include drill-downs and/or allow users to access the ad hoc Java report and graph generation tools.

Java-based Tools

New Java-based tools enable Web Interface users to create ad hoc reports and graphs right from their web browsers through a step-by-step process similar to TableTalk.

Java Graph Wizard

Java Graph Wizard guides a user step-by-step through creating a graph. The Graph Wizard is an alternative to stored graph procedures and generates FOCUS graph syntax from the user's input.

Java Report Assist

Java Report Assist provides a user-friendly environment for creating ad hoc reports in HTML, WP, DIF or LOTUS format. The Report Assistant supports automatic generation of complete record selection criteria, sort fields, headings and footings, subtotals, and calculations.

Complete documentation for this new product may be found in the *Web Interface Users Manual and Installation Guide Release 7.0.8*. (DN 1001038.1097).